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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,580

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Yoon-Seob Eom

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KED & ASSOCIATES, LLP

P.O. Box 221200

Chantilly, VA 20153-1200

EXAMINER

RAHIM, AZIM

ART UNIT

PAPER NUMBER

3744

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,580	EOM ET AL.	
	Examiner	Art Unit	
	AZIM RAHIM	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/25/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 6 and 12 are objected to because of the following informalities: Regarding claims 6 and 12, the limitation “the driving motor” should be written as --a driving motor-- in order to establish antecedent basis in the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by (US 3,666,169).

Regarding claims 1 and 15, Laing teaches a window type air conditioner (fig. 1) comprising: a case (4) of which one side is positioned at an indoor side (2) and another side is positioned at an outdoor side (3); an indoor heat exchanger (12) mounted inside the case (explicitly shown) positioned at the indoor side (explicitly shown) thus to be heat-exchanged with the indoor air; an indoor cross flow/centrifugal fan (21) for generating a blowing force so that the indoor air can pass through the indoor heat exchanger (explicitly shown by arrows) and

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for sucking the indoor air in a circumferential direction thereof (explicitly shown by arrows) and thereby discharging the indoor air in the circumferential direction thereof (explicitly shown by arrows); an outdoor heat exchanger (13a) mounted inside the case positioned at the outdoor side (explicitly shown) thus to be heat-exchanged with the outdoor air (explicitly shown); and an outdoor cross flow fan (22) for generating a blowing force so that the outdoor air can pass through the outdoor heat exchanger (explicitly shown by arrows) and for sucking the outdoor air in a circumferential direction thereof (explicitly shown by arrows) and thereby discharging the outdoor air in the circumferential direction thereof (explicitly shown by arrows).

Regarding claim 2, Laing teaches the limitation of providing a compressor (45) for compressing a refrigerant into a high temperature and a high pressure is installed at one side of the outdoor heat exchanger (explicitly shown in fig. 2), and a horizontal type compressor (the orientation is based on perspective of view) that a driving unit (col. 4 line 58, motor driven) and a refrigerant compression unit (col. 4 line 58, compressor portion) are horizontally arranged is applied as the compressor (explicitly shown in fig. 2).

Regarding claim 3, Laing teaches the limitation of providing an indoor air suction port (200) for sucking the indoor air is formed at the front side of the case (2) positioned at the indoor side (explicitly shown), and an indoor air discharge port (201) for discharging the indoor air is formed at the upper surface of the case (explicitly shown) positioned at the indoor side (inside of wall W).

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Regarding claim 4, Laing teaches the limitation of the indoor air suction port having a size that occupies up the front surface of the case (explicitly shown in fig. 1).

Regarding claim 5, Laing teaches the limitation of the indoor heat exchanger being vertically arranged inside the indoor air suction port (explicitly shown in fig. 1, and the orientation of the heat exchanger is based on perspective of view).

Regarding claim 6, Laing teaches the limitation of the indoor cross flow fan being composed of: a hub (the interior portion of the fan extending the length of the fan) arranged in a longitudinal direction of the indoor heat exchanger (explicitly shown in fig. 1, the orientation is based on the perspective of view) and connected to a driving motor (29); and a plurality of blades (explicitly shown in fig. 1) formed at the outer circumferential surface of the hub (explicitly shown) with a certain interval (the spacing of the blades) and arranged in a longitudinal direction of the indoor heat exchanger (explicitly shown, the orientation is based on the perspective of view).

Regarding claim 7, Laing teaches the limitation of providing a guide panel (209) for guiding the indoor air sucked in the indoor air suction port to an indoor air discharge port is installed at one side of the indoor cross flow fan (explicitly shown), and a stabilizer (25) for dividing a suction side and a discharge side of the indoor cross flow fan is installed at one side of the case (explicitly shown).

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Regarding claim 13, Laing teaches the limitation of a stabilizer (24) for dividing a suction side and a discharge side of the outdoor cross flow fan (explicitly shown in fig. 1) is installed between the first outdoor heat exchanger and the second outdoor heat exchanger (explicitly shown in fig. 1), and a guide panel (14) for guiding the indoor air sucked in the outdoor air suction port to the outdoor air discharge port is installed at one side of the outdoor cross flow fan (explicitly shown in fig. 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 1, 8-12 and 14-19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wuesthoff (US 2,941,382).

Regarding claims 1 and 15, Wuesthoff teaches a window type air conditioner (fig. 1) comprising: a case (11) of which one side is positioned at an indoor side (side of 15) and another side is positioned at an outdoor side (side of 19); an indoor heat exchanger (17) mounted inside the case (explicitly shown) positioned at the indoor side (explicitly shown) thus to be heat-exchanged with the indoor air; an indoor cross flow/centrifugal fan (16) for generating a blowing force so that the indoor air can pass through the indoor heat exchanger (explicitly shown by arrows) and for sucking the indoor air in a circumferential direction thereof (explicitly shown by arrows) and thereby discharging the indoor air in the circumferential direction thereof (explicitly shown by arrows); an outdoor heat exchanger (19) mounted inside the case positioned at the outdoor side (explicitly shown) thus to be heat-exchanged with the outdoor air (explicitly shown); and an fan (20) for generating a blowing force so that the outdoor air can pass through the outdoor heat exchanger (explicitly shown by arrows) and for sucking the outdoor air in a circumferential direction thereof (explicitly shown by arrows) and thereby discharging the outdoor air in the circumferential direction thereof (explicitly shown by arrows).

Wuesthoff fails to teach the limitation of providing an outdoor cross flow fan.

The general concept of providing an outdoor cross flow fan in a window air conditioning unit falls within the realm of common knowledge as obvious mechanical expedient and one having ordinary skill in the art would have been motivated to include the use of a cross flow fan in order to advantageously direct airflow in perpendicular directions, thus increasing ventilation efficiency.

Regarding claims 8 and 16, Laing teaches the limitation of providing an outdoor air suction port (area of 18) for sucking the outdoor air being formed at the rear surface of the case (explicitly shown) positioned at the outdoor side (explicitly shown), and an outdoor air discharge port (area of condenser unit 19) for discharging the outdoor air is formed at the upper surface of the case (part of the outlet of condenser section 19 extending past the top half of the case 11) positioned at the outdoor side (explicitly shown).

Regarding claim 9, the outdoor air suction port has a size that occupies up the rear surface of the case (explicitly shown in fig. 1).

Regarding claims 10 and 17, Wuesthoff teaches the limitation of the outdoor heat exchanger being composed of: a first outdoor heat exchanger (18) installed inside the outdoor air suction port (explicitly shown in fig. 1) thus to be heat-exchanged with the outdoor air sucked through the outdoor air suction port (explicitly shown); and a second outdoor heat exchanger (19) installed inside the outdoor air discharge port (explicitly shown in fig. 1) thus to be heat-exchanged with the outdoor air discharged to the outdoor air discharge port (explicitly shown).

Regarding claim 11, Wuesthoff teaches the limitation of the first outdoor heat exchanger is vertically arranged inside the outdoor air suction port (explicitly shown in fig. 1, depending on the perspective of view), and the second outdoor heat exchanger is horizontally arranged inside the outdoor air discharge port (explicitly shown in fig. 1, depending on the perspective of view).

Regarding claims 12 and 18, Wuesthoff teaches the limitation of the outdoor fan being composed of: a hub (center of fan 20) arranged in a longitudinal direction of the outdoor heat exchanger (explicitly shown in fig. 1, depending on the perspective of view) and connected to the driving motor (motor between fans 16 and 20); and a plurality of blades (blades of 20) formed at the outer circumferential surface of the hub (explicitly shown) with a certain interval (explicitly shown) and having a certain length (explicitly shown).

Regarding claims 14 and 19, Wuesthoff teaches the limitation of the blade of the outdoor fan being in contact with condensing water (condensate 25) stored at the lower surface of the case (explicitly shown in fig. 1) positioned at the outdoor side (explicitly shown in fig. 1) thereby to spray the condensing water when the outdoor cross flow fan is rotated (explicitly shown).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AZIM RAHIM whose telephone number is (571) 270-1998. The examiner can normally be reached on Monday - Thursday 7am - 3:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR 3/12/2008

/Frantz F. Jules/
Supervisory Patent Examiner, Art Unit 3744